ABSTRACT OF THE DISCLOSURE

Methods and compositions are provided for modulating, e.g., increasing or decreasing, the expression of telomerase reverse transcriptase (TERT). In the subject methods, the binding interaction of the GC-Box 5 repressor site with a repressor protein (or protein complex including the same) is modulated to achieve the desired change in TERT expression. The subject methods and compositions find use in a variety of different applications, including the immortalization of cells, the production of reagents for use in life science research, therapeutic applications; therapeutic agent screening applications; and the like.